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GENERAL STUDIES (TEST CODE : 2091)

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|-------------------|---------------------|---------------------|------------|
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| Medium Eng./Hindi | Eng | Registration Number | 409325 |
| Center | Online | Date | 03/09/2023 |

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| Q. No. | Maximum Marks | Marks Obtained |
| 1 | 10 | |
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| 3 | 10 | |
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| 5 | 10 | |
| 6 | 10 | |
| 7 | 10 | |
| 8 | 10 | |
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| 17 | 15 | |
| 18 | 15 | |
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| 20 | 15 | |

Total Marks Obtained:

Remarks:

INSTRUCTIONS

- Do furnish the appropriate details in the answer sheet (viz. Name, Registration Number and Test Code).
उत्तर पुस्तिका में सूचनाएं भरना आवश्यक है (नाम, प्रश्न-पत्र कोड, विद्यार्थी क्रमांक आदि)।
- There are **TWENTY** questions printed in **HINDI & ENGLISH**.
इसमें बीस प्रश्न हैं हिन्दी और अंग्रेजी में छपे हैं।
- All questions are compulsory.**
सभी प्रश्न अनिवार्य हैं।
- The number of marks carried by a question/part is indicated against it.
प्रत्येक प्रश्न/भाग के अंक उसके सामने दिए गए हैं।
- Answers must be written in the medium authorized in the Admission Certificate, which must be stated clearly on the cover of this Question-Cum-Answer (QCA) Booklet in the space provided. No marks will be given for answers written in medium other than the authorized one.
प्रश्नों के उत्तर उसी माध्यम में लिखे जाने चाहिए जिसका उल्लेख आपके प्रवेश पत्र में किया गया है और उस माध्यम का स्पष्ट उल्लेख प्रश्न-सह-उत्तर (क्यूसीए) पुस्तिका के मुख्य पृष्ठ पर अंकित निर्दिष्ट स्थान पर किया जाना चाहिए। उल्लिखित माध्यम के अतिरिक्त अन्य किसी माध्यम में लिए गए उत्तर पर कोई अंक नहीं मिलेंगे।
- Word limit in questions, if specified, should be adhered to.
प्रश्नों में शब्द सीमा, जहाँ विनिर्दिष्ट है, का अनुसरण किया जाना चाहिए।
- Any page or portion of the page left blank in the Question-Cum-Answer Booklet must be clearly struck off.
उत्तर पुस्तिका में खाली छोड़ा हुआ पृष्ठ या उसके अंश को स्पष्ट रूप से काटा जाना चाहिए।

Is student recommended for One-to-One mentoring?

Recommended

Strongly Recommended

16-B, 2nd Floor, Above National Trust Building, Bada Bazar Marg, Old Rajinder Nagar, Delhi-110060

Plot No. 857, 1st Floor, Banda Bahadur Marg (Opp. Punjab & Sind Bank), Dr. Mukherjee Nagar, Delhi- 110009

EVALUATION INDICATORS

1. Contextual Competence
2. Content Competence
3. Language Competence
4. Introduction Competence
5. Structure - Presentation Competence
6. Conclusion Competence

Overall Macro Comments / feedback / suggestions on Answer Booklet:

1.

2.

3.

4.

5.

6.

All the Best

1. भारतीय कृषि में जल के अकुशल उपयोग के लिए उत्तरदायी कारण क्या हैं? जल उपयोग दक्षता में सुधार के उपाय सुझाइए। (150 शब्दों में उत्तर दीजिए) 10
What are the reasons behind the inefficient use of water in Indian agriculture? Suggest measures to improve water use efficiency. (Answer in 150 words) 10

Indian Agriculture, at around 16% of GVA, is the biggest consumer of water in India. Very essential for food security (Article 21), but at the same time suffers from inefficiency.

Reasons for inefficient use of water in Agriculture:

① Water market distorted

→ with no pricing for groundwater
→ free electricity for farmers propels excess usage

has also resulted in crop distortion

- water guzzling crops grown in water scarce areas

Ex: Punjab, Haryana - wheat.

has prevented means of efficient irrigation

- micro-irrigation has water efficiency of 80-90% compared to groundwater of 60-70%. (NABARD)

② State intervention is ineffective

- use of Minimum Support Price to ensure efficient crop diversification lacking
- promotion of micro-irrigation
 - ↳ credit facilities
- water river linkages missing - reduced canal irrigation (though losses in evaporation, runoff)

Measures to improve water-use efficiency:

- ① Adequate crop diversification - pulses, millets
- ② micro-irrigation becoming the norm
- ③ Crop choice based on agroclimatic conditions
 - Precision agriculture
- ④ Farmers as energy producers - PM KUSUM
 - reduces negative externalities of free electricity
- ⑤ Effective price signalling through MSP to ensure assured return on investment.

With India facing acute water distress (NITI Aayog), it becomes essential to completely transform agriculture to really enter the Aamit Kaal.

2. भारत में सार्वजनिक वितरण प्रणाली (PDS) के तहत फूड बास्केट में विविधता लाने के सामाजिक, आर्थिक और पर्यावरणीय लाभ क्या हैं? (150 शब्दों में उत्तर दीजिए) 10
- What are the social, economic and environmental benefits of diversifying the food basket under the Public Distribution System (PDS) in India? (Answer in 150 words) 10

Public Distribution Systems (PDS) is the distribution of essentials including food grains via chains of fair price shops, covering almost 50% urban and 75% rural population ensuring food security.

Though currently only few food grains - rice, wheat, oil and few others - being given, there is a need to diversify this basket.

Social, economic and environmental benefits of this diversification:

- ① Social benefits → address malnutrition
 - Healthy population (Human Capital)
 - Reduced morbidities leading to quality well-being, nutritional security
 - Address the acute - multidimensional poverty (16.4% of population, GNDP)
- ② Economic benefits
 - Reduced health expenditure

- for both state and individuals
- Targeted PDS ensuring cost-benefit way of taking care of the poor.
 - Reduced import bills by diversifying crop production in India

③ Environmental benefits

- Crop diversification to pulses, millets - reduced stress on water, soil
- Reduced fertilizer consumption - soil, land degradation prevented
- Climate Smart Agriculture to be taken up - Aligning what we eat to to the climate.

Thus, there is need to include more nutritional crops like

- pulses
- millets
- fortified food grains.

This would help us achieve nutritional security besides the current food security fulfilling SDG 2 and also taking care of SDG 3.

3. क्या पशुधन क्षेत्र को पुनः सक्रिय करना भारत के किसानों की संधारणीय आजीविका और आय में वृद्धि सुनिश्चित करने करने की कुंजी हो सकता है? अपने उत्तर के समर्थन में कारण प्रस्तुत कीजिए। (150 शब्दों में उत्तर दीजिए) 10
- Can re-energising the livestock sector be the key to sustainable livelihood and increasing the income of Indian farmers? Give reasons in support of your answer. (Answer in 150 words) 10

Indian farmers are currently earning Rs. 8800/- (avg per month, NABARD 2020), and there is a concerned effort to double the farmers income (Ashok Dalwai Committee). One of the key recommendations was to put the livestock sector in the center of plans.

Why re-energising livestock sector would help this:

- ① The Nabard survey indicated that,
 - ⇒ majority of farmers earn their substantial income from allied activities ⇒ more profitable
- ② India has the abundant and the largest livestock population in the world
 - no.1 in dairy production
 - no.3 in fisheries

- ③ Concerted government efforts in strengthening the market-farm connectivity
- Creation of Dairy FPOs,
 - Infrastructure development fund
- ④ Quality breed and inputs
- Govt vaccination against diseases
 - Supply of inputs at subsidised prices
 - Research on breed improvement
- ⑤ Farmers led model - enormous success
- AMUL, Nandhini

Thus, reenergizing this sector would help farmers move away from the

→ vagaries of monsoon in Agriculture

→ distorted price market in agriculture

and ensure a steady stream of income.

It becomes essential to strengthen the already existing government to reach every

farmer, to bring real freedom to farmers

in this Azadi Ka Amrit Mahotsav.

4. क्या आप इस बात से सहमत हैं कि आर्थिक सुधार के बाद की अवधि में उच्च आर्थिक संवृद्धि के परिणामस्वरूप संवृद्धि का लाभ हाशिए पर मौजूद वर्गों तक नहीं पहुंच पाया है, जिससे समावेशी विकास चिंता का एक प्रमुख विषय बन गया है? अपने उत्तर का औचित्य सिद्ध कीजिए। (150 शब्दों में उत्तर दीजिए) 10

Do you agree that high economic growth in the post-reform period has not resulted in growth trickling down to the marginalised sections, rendering inclusive growth a major concern? Justify your answer. (Answer in 150 words) 10

India witness a tremendous growth spell post the 1991 economic liberalisation period, now the third largest economy in the world. Nevertheless, we have the largest multi-dimensionally poor population (16.4%) and one of the highest unemployment rates

↳ this has all resulted in a major concern for inclusive growth - where the growth reaches every individual and every geography of this country.

Growth has not trickled down to marginalised sections:

- ① SCs, STs and minority communities are the larger chunk in the poor and unemployed population
- ② Initiatives like stand-up ^{India} scheme

hardly has 1,63,000 beneficiaries
against the population of 16.6% (SCs).

③ NFHS 5 survey also indicates that
→ marginalised communities lack the
most in nutrition - more stunted,
wasted children.

④ Huge regional imbalances between these
sections itself
→ ES 2017 - the cleavaged India.

But, while there is still a long way to go
in fulfilling the basic necessities of many,
we had some noteworthy achievements in
the post-reform period:

⇒ lifted around 271 million population
out of poverty till 2015, continually
declining poverty

⇒ One of the largest food security scheme,
health insurance scheme, RTE run
on the back of the post-reform growth.

In our vision of a developed country (Panch
Pran), is deeply embedded the idea of
inclusive growth.

5. राष्ट्रीय स्वच्छ वायु कार्यक्रम (NCAP) के परिणाम का मूल्यांकन कीजिए। मिशन LiFE वायु प्रदूषण के मुद्दे का समाधान करने में NCAP को कैसे पुनर्जीवित कर सकता है? (150 शब्दों में उत्तर दीजिए) 10
- Evaluate the outcome of the National Clean Air Programme (NCAP). How can Mission LiFE reinvigorate the NCAP in addressing the issue of air pollution? (Answer in 150 words) 10

National Clean Air Programme was launched to have a focussed attention on reducing the PM_{2.5} and PM₁₀ levels compared to the 2019 levels, since they are the most intrusive air pollutants.

The outcome of NCAP

- ① Reduced levels of PM_{2.5} and PM₁₀ on majority of days, as measured at the national level
- ② NCAP has ensured a basic coordination across different departments
 - Pollution Control Board
 - Industries Regulation
 - Transport - pollution metering of vehicles
- ③ It has also created a climate and pollution conscious population

- products like air purifiers
at home, companies developing
ACs with PM purifying technology

④ It has tightened regulations on

- thermal power polluters
- roadside restaurants polluters
- brick kilns

But still there is a lot to do at the air pollution front.

How mission LIFE can reinvigorate
NCAP

- ⇒ Lifestyle for Environment - a people's movement ensures a
- carbon footprint conscious lifestyle
 - use of more public transport
 - planting more trees for cooling
 - springings of people's associations to coordinate efforts

Thus, LIFE would propel the efforts already made at NCAP level to ensure India fulfills its promise under Panch Ameet.

6. पारिस्थितिक तंत्र पर वनाग्नि के प्रभाव की विवेचना कीजिए। वनाग्नि के खतरे से निपटने में UNEP के फायर रेडी फॉर्मूला के महत्त्व का वर्णन कीजिए। (150 शब्दों में उत्तर दीजिए) 10
- Discuss the impact of wildfires on the ecosystem. Describe the significance of the UNEP's Fire Ready Formula in dealing with the menace of wildfires. (Answer in 150 words) 10

Wildfires, one of the rising phenomenon in the climate change era (the US, Canada, Europe), has varied impacts on the ecosystem. In India, around 30% of forests are p. fire prone (ISFR).

Impact of wildfires on the ecosystem

- ① Destruction of vegetation
- ② Also leads to ash deposition on the soil → though increases fertility to some extent
→ excess leads to land degradation and pollution
- ③ loss of biodiversity - the flora and fauna of the destroyed ecosystem moves out
→ micro organisms in the soil are destroyed

- ④ Water bodies in the ecosystem are also polluted with ash run-off and deposition
- ⑤ Destroys the carbon sink, release enormous CO_2 and other gases into the air ecosystem

In this light, UNEP's fire ready formula would enable communities to be better prepared to deal with wild fires.

The formula:

- ① Fire prone zone mapping
- ② Creating buffers between vegetation to reduce fuel supply and increase natural breaks
- ③ Human error to be reduced - 9/10 fires in Europe ignited by humans.
- ④ Fire extinguisher ready - with drones ^{helicopters}
- ⑤ Use of indigenous knowledge

As we continue our race against climate change, it becomes essential to ^{have} scientific coordinated efforts.

7. हाल ही में, भारतीय अंतरिक्ष अनुसंधान संगठन (इसरो) ने लघु उपग्रह प्रक्षेपण यान (SSLV) नामक अपना नया रॉकेट प्रक्षेपित किया। इसके क्या लाभ हैं? आने वाले वर्षों में SSLVs इसरो के लिए कैसे गेम चेंजर सिद्ध हो सकते हैं? (150 शब्दों में उत्तर दीजिए) 10
- Recently, the Indian Space Research Organization (ISRO) launched its new rocket called Small Satellite Launch Vehicle (SSLV). What are its advantages? How can SSLVs be a game changer for ISRO in the years to come? (Answer in 150 words) 10

Indian Space Research Organisation (ISRO)
lifting the spirit of the nation besides
 the launching of various mission has
recently launched a new Small satellite
launch vehicle (SSLV)

Advantages of SSLV:

① Indigenous technology

→ launch from our own rockets
earlier we used other nations small
 launch vehicles

② International standards - in designing the SSLV

How can it be a game changer
in the coming years

① facilitate international collaboration

- used sscv to launch satellites
of even developed countries like
france.

② Reduced cost from using other
nations - could be invested
elsewhere

③ launch of small satellites suiting
Indian needs, at our own pace

→ Ability to manoeuvre to
our needs!

Thus, ISRO with its ever expanding
ambition has added new features
to its launch vehicle kitty which
is to benefit India and also the
world.

8. बायोपाइरेसी विकासशील विश्व के मौजूदा पारंपरिक ज्ञान के लिए प्रमुख चिंता का कारण क्यों है? भारत सरकार द्वारा मौजूदा पारंपरिक भारतीय ज्ञान की सुरक्षा के लिए क्या कदम उठाए गए हैं? (150 शब्दों में उत्तर दीजिए) 10
- Why is biopiracy a cause of great concern to the existing traditional knowledge of the developing world? What steps have been taken by the government of India for protecting the existing traditional Indian knowledge? (Answer in 150 words) 10

Biopiracy is the crime of non-permissive, un-authorised use of genetic and biological information to the disadvantage of the original owners of the information.

Cause of great concern to the existing traditional knowledge of developing world:

① Indigenous knowledge commercialized with no benefits directed to the indigenous community.

→ research on indigenous communities - genetic makeup

→ traditional medicines like

Ayurveda, Siddha commercialized

② changing the nature of traditional

knowledge

→ distortion for future generation

③ Destruction of civilizational heritage

Steps taken by the government of India :

- ① Implementation of Nagoya Protocol on Benefits sharing
- ② Implementation of Plant Varieties Act
- ③ Creation of repository of various varieties of cereals
- ④ Developing genetic mapping of various populations

There is a need to ensure that that in utilizing the wisdom of the tradition, the benefit accrues to the duly deserved.

9. असम राइफल्स को पूर्वोत्तर भारत में सीमा प्रबंधन और उग्रवाद से निपटने में किन चुनौतियों का सामना करना पड़ता है? चर्चा कीजिए कि कैसे इन चुनौतियों के समाधान हेतु इस बल के फोकस में बदलाव की आवश्यकता है। (150 शब्दों में उत्तर दीजिए) 10
- What are the challenges faced by the Assam Rifles with regard to border management and tackling of insurgency in North-East India? Discuss how these challenges require a reorientation of the force. (Answer in 150 words) 10

Assam Rifles, one of the Border Security forces guarding the Bangladesh, Myanmar Border is also tasked with tackling the insurgency in North-East.

Challenges faced by the Assam Rifles

- ① Poorly equipped
→ in terms of weapon, uniform
- ② Lack of coordinated information sharing with local police
→ duplicacy of efforts
→ missing crucial junctures
- ③ Adequate support in training missing
→ owing to the terrain,

nature of insurgency - guilla warfare

- ④ Inadequate modernisation
→ use of digital technologies,
GIS spatial maps.

Need for re-orientation of the force:

- ① Terms of engagement with local police, Armed forces to be clearly defined
- ② Investment and funding - equipment, modernisation
- ③ Adequate training suiting to the evolving nature of threat
- ④ more integrated checkpoints
- ⑤ Coordination with cross-country forces

Thus, with the security of Borders and peace in North East, a new path of development in Aamit kaal is possible

10. अंतरिक्ष में शस्त्र स्थापित करने की होड़ अंतरिक्ष को शस्त्रों के संघर्ष का अगला युद्ध क्षेत्र बनाते हुए जल्द ही उस सीमा को पार कर सकती है जहां से वापस लौटना संभव नहीं होगा। अंतरिक्ष के शस्त्रीकरण के लिए उत्तरदायी संभावित कारण क्या हैं? इसके निहितार्थों पर चर्चा कीजिए। (150 शब्दों में उत्तर दीजिए) 10
- The race to put weapons in space may soon pass the point of no return making space the next theatre of arms struggle. What are the possible reasons behind the weaponization of space? Discuss its implications. (Answer in 150 words) 10

Weaponization of space is both the use of space for ground level military operations as well as the emergence of space as the new ground for warfare.

Race to put weapons in space
 ⇒ as demonstrated by anti-satellite testings by nations
 ⇒ creation of space division in armed forces.

Possible reasons behind weaponisation

① Advancement in technology

→ the enabling role of this development

② more and accurate knowledge

about space has been gained

- ③ Global competition - to match the adversary
- ④ Weak regulations - Outer space Treaty 1967 is silent on weaponisation of space
- ⑤ Enormously enhanced capability - need to be stronger.

Implications of this

- ① Destruction of heritage of space, peaceful uses of space
- ② Kessler syndrome from space debris
- ③ Uncontrolled nature of warfare - enormous harm to finances

Efforts such as Artemis Accord has to be supplemented with modifying Outer space Treaty 1967, to ensure a responsible use of outer space.

11. हाल ही में, जवाहरलाल नेहरू पत्तन (JNP) भारत का पहला 100% लैंडलॉर्ड पोर्ट बन गया है। लैंडलॉर्ड पोर्ट मॉडल से आप क्या समझते हैं? पत्तनों के प्रबंधन में प्रयुक्त विभिन्न मॉडल कौन-से हैं? (250 शब्दों में उत्तर दीजिए) 15
- Jawaharlal Nehru Port (JNP) recently became the first 100% Landlord Port of India. What do you understand by the Landlord Port model? What are the different models employed in the management of ports? (Answer in 250 words) 15

Jawaharlal Nehru Port, is one of the busiest ports in India. It also figured in the top 10 ports of the world in the turnaround time category. It recently became the first 100% Landlord Port of India.

Landlord port model:

① In this model,

the state ⇒ acts as the landlord
(the Port Trust of the port and India) partakes no role
in the operations of
the port

A private player ⇒ has full control
over the operations

of the port. It pays
the landlord on the
revenue sharing
arrangement made.

Different models employed in
the management of ports in India

- ① State as both the owner as
well as the operator of the
port. Ex: Kamarajar Port
- ② state as the owner of the port
as well as the authority over
the operations but employees
tendered contract or outsourcing
of operations.
- ③ The third is the landlord
model as described above
— where the authority of

ownership and operations
are split.

Advantages of land-locked port model :

- ① Improves the efficiency of operations
→ as revenue sharing is the basis
- ② Generates resources for further investment
- ③ meeting international standards

Nevertheless, there has to be clear rights-obligations framework in place to secure the success of the model. This would go a long way in addressing the burdensome logistics cost (14%).

12. भारत में कृषि मशीनीकरण को बढ़ावा देने के लिए शुरू की गई कृषि मशीनीकरण पर उप-मिशन (SMAM) योजना के प्रदर्शन का विश्लेषण कीजिए। (250 शब्दों में उत्तर दीजिए) 15
Analyse the performance of the Sub-Mission on Agricultural Mechanization (SMAM) scheme launched to promote farm mechanization in India. (Answer in 250 words) 15

Farm mechanization, use of machines in farming - tractors, sowing, weeding machines, are expected to increase the productivity by 30% and reduce input costs by 20%. (NABARD), and thus paving way for doubling farmers income (Ashok Dalwai).

Performance of Sub-mission on Agriculture mechanization:

Success:

- Establishment of Custom Hiring Centers mechanization units in villages to promote uberization of agriculture
- Farm equipment credit - focused credit supply

→ Machinery demonstration and training along with state governments.

Challenges :

→ The farm mechanization in India stands @ 45% (NABARD)

→ while that of US is 95%,

China is 57%.

→ The farm mechanization market is highly skewed towards tractors

→ 80% of market - tractorization

than mechanization

→ Compared to the 86% small and marginal farmers

→ the number of custom Hiring Centers are very low

→ hinders accessibility

→ the flow of credit is also not sufficient.

- Research and Development on low scale technology is lacking
 - given that the average land holding in India is 1.08 hectares (Agri Census, '16)
- Also, farm mechanization needs convergence with other schemes
 - eliminate Smart Agriculture
 - soil Health card scheme
 - Reducing food wastage

Thus, as India propels to be the Vishwaguru of this era, it is essentially being developmental freedom to our farmers.

13. खाद्य प्रसंस्करण क्षेत्र की अप्रयुक्त क्षमता का दोहन करने और इसके सामने आने वाली चुनौतियों का समाधान करने में डिजिटलीकरण की क्षमता पर चर्चा कीजिए। (250 शब्दों में उत्तर दीजिए) 15
Discuss the potential of digitization in harnessing the untapped potential of the food processing sector and resolving the challenges that it faces.
(Answer in 250 words) 15

Food Processing industry, the sun-rise sector, simultaneously enables us to fulfill objectives of doubling farmers income and reducing food wastage (₹96,000 crore annually, NITI Aayog).

Challenges faced by the food processing sector

- ① Lack of scale
→ majority of the food processing units are in the micro category
- ② Outdated technology
→ lack of sufficient credit to modernize the technology
- ③ Steady source of raw material
→ vagaries of monsoon
- ④ Logistics cost, (@ 14% overall economy)

→ connectivity between farm
to factory.

- ⑤ Lack of storage facilities to the extent required
- ⑥ No market intelligence in tapping the foreign markets.

Potential of digitization in harnessing the untapped potential of FPI :

- ① Formalization of micro food processing industries

→ digitization of processes in the micro-units - seamless integration with the government systems - tax credit subsidies

- ② Market intelligence

→ digitally enabled FPI can get market inputs real-time plus develop market analysis

- ③ Helps forecast their raw material arrival and the market requirement.
- ④ Enables a scientific storage system and management
- ⑤ Helps in product development to meet the modern demands of consumers
- ⑥ Enables collaborations with foreign markets for increased market access.

Thus, there is the need to bridge the digital gap between small-scale units, to ensure that the benefits of digitization reaches all.

Handholding of small units is also essential to fully realize the potential of FPI in this Amit kaal

14. भारत में भू-अभिलेखों के आधुनिकीकरण का क्या महत्व है? इस आलोक में राष्ट्रीय जेनेरिक दस्तावेज पंजीकरण प्रणाली (NGDRS) की विशेषताओं का वर्णन कीजिए। (250 शब्दों में उत्तर दीजिए)

15

What is the significance of land record modernization in India? In this light, state the features of the National Generic Document Registration System (NGDRS). (Answer in 250 words)

15

Land Records in India, with the potential to transform the developmental trajectory of especially the rural India, is currently in the old record management era - in papers with no proper of Records of Rights.

Significance of Land Record modernization in India:

- ① creating a land records database
→ through uniquely geo-mapping of land parcels, linking it with Aadhar
→ enables completely digitized modern land record
- ② A precursor to this is the clear

Settlement of land titles

→ which would reduce the
civil litigation in courts

- ③ Enables credit facilitation to
farmers + as collateral
- ④ Remove the information asymmetry
in the real estate market
→ with modernized land records
having potential to develop a
transparent organized market for
land → leads to price discovery
for land.

In this light,

The features of the National Generic
Document Registration System:

- A model document system
→ has feature to customize
to the requirements of the state

- inbuilt vernacular languages
 - to facilitate wide coverage
- facility of GIS mapping
 - real-time capturing of land coordinates
 - potential to calculate the registration rates basis the location of the land
 - reduced corruption
- linkage with national land records database
 - removes information gap

Thus, clubbed with other initiatives like SWAMITVA scheme, these steps are ushering in a new era of land management; thereby drilling the seeds for second generation land reforms.

15. 'प्रधान मंत्री फसल बीमा योजना' की शुरुआत से ही प्रौद्योगिकी के उपयोग ने इसकी सफलता में महत्वपूर्ण भूमिका निभाई है। चर्चा कीजिए। इस योजना को अधिक किसान-अनुकूल बनाने के लिए और क्या बदलाव किए जा सकते हैं? (250 शब्दों में उत्तर दीजिए) 15
- The use of technology has played a key role in the success of the 'Pradhan Mantri Fasal Bima Yojana' since its inception. Discuss. What further changes can be incorporated to make the scheme more farmer-friendly? (Answer in 250 words) 15

Pradhan Mantri Fasal Bima Yojana was launched to secure the farmers against a wide variety of risks - including local risks and post-harvest losses.

Success of PMFBY - with technology as the key role:

① Scheme envisaged usage of technology to measure the crop losses
→ wing drones, Geo-spatial

- with around 1.2 lakh crore disbursed to farmers (ES 23), the success of these technologies is evident.

② Technology in the digitization space has also brought in dividends

→ Varied premium rates for small and marginal farmers applied seamlessly

→ premium calculation based on crops

③ Technology in tracking and monitoring

→ Tracking & State government disbursal of its share

→ revealed delays or no-show.

→ Tracking of benefits disbursal — its timeliness has shown lacunae.

The share of small, marginal and vulnerable farmers in PMFBY has increased over 280% since its inception (ES 23)

Nevertheless, there are few improvements that can be made.

changes needed to make it
more farmer-friendly

- ① Timely assessment of crop losses
by the state government
→ compulsory use of technology
→ penalties for delay
- ② Timely disbursement of benefits
to farmers - penalties for delay
- ③ A stratified grievance-redressal
mechanism
→ Central, State and District
level to ensure effective service delivery
- ④ Generation of awareness to ensure
100% coverage - through extension
centers.

As MS Swaminathan quipped, if
agriculture goes wrong in our country
then nothing can go right. Thus,
it becomes necessary to fortify farmers
against losses.

16. चर्चा कीजिए कि कैसे नवीकरणीय ऊर्जा की ओर ट्रांजिशन भारत में महिलाओं के जीवन को बदलने और उनकी पूर्ण क्षमता को उजागर करने का सामर्थ्य रखता है। (250 शब्दों में उत्तर दीजिए) 15
- Discuss how the transition towards renewable energy has the potential to transform the lives of women in India and unlock their potential. (Answer in 250 words) 15

India is on a concerted effort to transition towards renewable energy (currently 43%) with the aim of 50% by 2030 (Panch Amrit)

Transition towards renewable energy
- potential to transform lives of women

① women as energy producers

→ schemes like pm-kusum combined with the phenomenon of feminization of agriculture

→ makes women as energy producers.

⇒ increases their livelihood opportunities

② Decentralized nature of renewable energy

⇒ Coimbatore Panchayat
generated revenue from wind energy → easily replicable in
SHGs, micro-finance, cooperatives of women → with targeted credit facility

③ Natural Biogas plants in the rural could be transformed on modern lines - with women at the center

④ It also enables them to look beyond their constraints
→ increased access to power -
flourish cottage industries and tailoring

It has the potential to make women truly empowered and dignified

Nevertheless, some shortcomings and the parallel reforms that need to be considered include:

- ① No women focus in renewable energy ⇒ Earmark funds & flagship schemes to women-led enterprises
- ② Leveraging & existing women's groups for knowledge transfer
- ③ Demonstration, credit facility, handholding ⇒ all bundled into a targeted scheme.

Thus, as we embark on a new trajectory in development, it is essential to utilize the potential of women simultaneously powering them (SDG5)!

17. जलवायु परिवर्तन भारत द्वारा भुखमरी और कुपोषण दूर करने में सामना की जाने वाली चुनौतियों में कैसे वृद्धि कर रहा है? 2030 तक शून्य भुखमरी प्राप्त करने की भारत की प्रतिबद्धता के संदर्भ में चर्चा कीजिए। (250 शब्दों में उत्तर दीजिए) 15

How does climate change exacerbate the challenges that India faces in eliminating hunger and malnutrition? Discuss in the context of India's commitment to achieve zero hunger by 2030. (Answer in 250 words) 15

India has a commitment to achieve zero Hunger by 2030 (SDG 2). However, the current status of malnutrition,
 NFHS 5 \Rightarrow starved $\sim 35\%$
wasted 19.3%
undernourished $\sim 32\%$

leaves a lot to be desired.

Climate change exacerbates the challenges in eliminating this:

① Agriculture failure

\rightarrow failure of crops on account of drought, monsoon changes
 \rightarrow reduced nutritional food supply

② Climate Disasters

\rightarrow increased instances of floods, cloud bursts, heatwaves

Have the children as the most
vulnerable population

- broken supply chains,
- impoverished families

all results in hunger and malnutrition

③ Climate change impact on water
→ water stress leading poor
sanitation, drinking water facilities

④ Climate change induced violence,
displacements
→ Disruption in government
service in change of place

⑤ Reduced capacity of states to
service welfare schemes

→ RBI - India needs 2% of
GDP annual for green financing

⑥ Globalized nature of climate change
→ Rising sea level disrupting

coastal efforts in reducing hunger.

India needs a renewed focus on
reducing climate hunger and
malnutrition

- ① A focused policy on internal climate refugees
→ One nation One ration card
to ensure continued PDS
- ② Leveraging external financing, CSR
→ to increase spending
- ③ Convergence → ministry of Climate Change
of efforts → ministry of Health
→ ministry of women and child
→ ministry of Drinking water and sanitation
- ④ International experiences - UNESCO case studies.

Thus, transnational effort focussed beyond
necessity to ensure real freedom, as
enviraged in our civilizational history -

Destroy the world, if one man goes hungry (Subramaniya Bharti).

19. आतंकवाद के वित्तपोषण पर अंकुश लगाने हेतु किए गए अनेक प्रयासों के बावजूद अंतर्राष्ट्रीय समुदाय के लिए यह एक मुख्य चुनौती बना हुआ है। चर्चा कीजिए। (250 शब्दों में उत्तर दीजिए) 15
Terrorism financing continues to remain a major challenge for the international community despite several efforts to curb it. Discuss. (Answer in 250 words) 15

Terrorism financing - financing directly or indirectly for terrorist activities - that are aimed at creating a huge destruction in the lives of people besides instilling a sense of fear for various causes.

Efforts taken to curb terrorism financing

- ① Financial Action Task Force
→ various standards established for financial institutions to ensure effective KYC checks
→ Guidelines on money laundering to curb the same in funding
- ② UN office on Organised Crime
→ the Vienna Convention, as the

starting point, the office has
taken efforts to coordinate
across jurisdictions

- ③ various UNSC resolutions -
exerting pressure on nations to
strengthen their efforts
- ④ BASEL committee - also asked
banks to have a uniform position
against terror financing.
- ⑤ European cryptocurrency regulation
→ to block the anonymous
financing.

Still, terror financing remains a
major challenge:

- ① Organised Crime and Money
laundering still looms large
- UNODC - 2-5-1-9 global
annual GDP is laundered

② New avenues and markets
for organised crime and terrorism

→ Recently NSA arrested people
investing in cryptocurrency funds,
that was indirectly funding terrorism

→ emergence of dark web, dark net

→ parcel, delivery services for
drug trade (instances in US)

→ sophisticated cyber threats,
cyber hacks employed to extort

③ Ineffective efforts at the global level

→ tussle between financial
confidentiality and disclosure

→ poorly implemented KYC norms

Thus, there is a need for concerted
coordinated global effort to ensure
this menace is stopped.

"Atmano mokshartham Jagadithya"

- for our own liberation as well as the
liberation of others

20. कृत्रिम बुद्धिमत्ता (AI) में होने वाली प्रगति से राष्ट्रीय सुरक्षा के दृष्टिकोण से अवसरों के साथ-साथ चुनौतियों में भी वृद्धि होगी। भारत के संदर्भ में चर्चा कीजिए। (250 शब्दों में उत्तर दीजिए) 15
- Advances in artificial intelligence (AI) will progressively multiply the opportunities as well as challenges from the national security perspective. Discuss in the context of India. (Answer in 250 words) 15

Artificial intelligence, built on machine learning and deep learning has come to generate its own intelligence. This kind of AI has great potentialities as well as challenges.

Advances in AI - opportunities in Nation Security

① Multiply our Armed forces capability

→ AI can be used for reconnaissance & tactical understandings

→ especially in the era of threats & threats currently underway

→ offensive AI weapons could be developed

→ remote, non-human warfare

② Managing cyber security -
cuts across all other security needs
→ AI can be deployed to
identify and dislodge cyber threats
→ develop cyber lakshman
recha

③ In Internal security
→ AI used ~~to~~ along with
geospatial technologies to forestall
Naxalite attempts against security
personnel.

Advances in AI - challenges in National
security

① Complications to the traditional
war ethics
→ deciding the proportionate
use of power needs human intelligence
→ fixing of accountability
for machines, unintended dire
consequences of AI.

- ② AI is still evolving - fear of
AI taking over humans -
need for cautious, incremental approach
→ its negative externalities yet to
be known
- ③ Concerns of privacy, biases in
data learning
→ prejudiced AI
- ④ Unbridled race in global AI -
creates more security complications
than it saves
→ state actors launching cyber
attacks (Russia-Ukraine war)

Thus, any technology is a tool, there
is the need to temper it to the
ethical values of humans. In the
spirit of Vasudhaiva Kutumbakam,
there is need for global coordination
in regulating AI.